REMARKS/ARGUMENTS

In the Office Action mailed June 30, 2005, the Examiner rejected claims 1-7, 9-17, 19 and 20 under 102(e) as anticipated by Colbourne et al. US Patent No. 6,804,467 and Copner et al. US Patent No. 6,683,721.

By this Amendment, claims 3, 4, 7, 13, 14 and 17 have been cancelled. Applicants traverse the 102(e) rejections of claims 1, 2, 5, 6, 9-12, 15, 16, 19 and 20 through amendments and arguments made herein.

In claim 1, Applicants have added the clause "...wherein the beam director is a single polarizing beam splitter that is operatively coupled with a plurality of ninety degree mirrors to facilitate inducement of at least four units of group delay on the optical beam...." to define more clearly over the art of record. Applicants have changed "a first unit" and "a second unit" to "a unit" and "a further unit," respectively, to put the claim in better form.

In claim 11, Applicants have added the clause "...wherein a single polarizing beam splitter is operatively coupled with a plurality of ninety degree mirrors to facilitate inducement of at least four units of group delay on the optical beam ...." to define more clearly over the art of record. Applicants have changed "a first unit" and "a second unit" to "a unit" and "a further unit," respectively, to put the claim in better form. Applicants have also substituted the singular concept of "the changed polarization" for the previous references to "a first polarization" and "a second polarization" in order to clarify the claim.

All amendments have support in the specification as filed.

THE CLAIMS ARE ALLOWABLE SINCE THEY RECITE DISPERSION COMPENSATORS AND METHODS THEREFOR IN WHICH A SINGLE POLARIZING BEAM SPLITTER (PBS) AND A PLURALITY OF NINETY DEGREE MIRRORS COOPERATE TO FACILITATE INDUCEMENT OF AT LEAST FOUR UNITS OF GROUP DELAY ON AN OPTICAL BEAM

The claims as amended recite dispersion compensators and methods therefor in which a single PBS and a plurality of ninety degree mirrors cooperate to facilitate inducement of at least four units of group delay on an optical beam. Neither Colbourne nor Copner alone or in combination teach or suggest such an efficient PBS-based dispersion compensator or method.

Colbourne addresses two classes of dispersion compensators. At Figs. 5, 6, 8 and 9, Colbourne relates a first compensator class that utilizes a y-beam displacer (yBD) to induce multiple units of group delay on an optical beam. Colbourne's yBD-based compensators do not include any PBS. They are therefore far removed from Applicants' recited compensators and methods which employ a PBS operative with a plurality of ninety degree mirrors to facilitate inducement of at least four units of group delay on an optical beam. Indeed, Colburne's yBD-based compensators induce multiple units of group delay on an optical beam through beam "walk off" in a manner reminiscent of Applicants' crystal polarizer-based compensator embodiment (see Fig. 5) that the Examiner deemed a different species than Applicants' recited PBS-based compensators and that is unelected. Accordingly, the first class of dispersion compensators addressed in Colbourne do not anticipate the claims.

At Figs. 7 and 10, Colbourne addresses a second compensator class that utilizes a PBS block (that is, a stack of multiple PBS) in the absence of ninety degree mirrors to facilitate inducement of multiple units of group delay on an optical beam. Colbourne's "stacked PBS" approach is also far removed from Applicants' recited compensators and methods which employ a single PBS operative with a plurality of ninety degree mirrors to facilitate

inducement of at least four units of group delay on an optical beam. It bears noting that Applicants' recited single PBS-based compensators and methods have advantages over Colbourne's "stacked PBS" compensators in, for example, requiring less PBS overhead and permitting a more compact compensator geometry. Accordingly, the second class of dispersion compensators addressed in Colbourne do not anticipate the claims either.

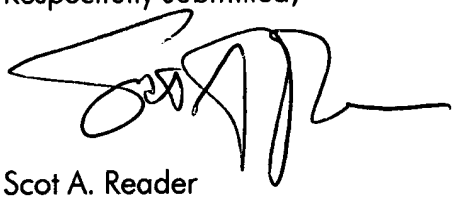
Finally, Copner addresses, at Fig. 11d, a single PBS-based dispersion compensator in the presence of a single ninety degree mirror and in which only two units of group delay are induced on an optical beam. Applicants' recited compensators and methods, in contrast, operate in the presence of a plurality of ninety degree mirrors and induce at least four units of group delay on an optical beam. Applicants' recited compensators and methods are thus at least twice as efficient as Copner's. Indeed, Applicants' strategically placed plurality of ninety degree mirrors, with their ability to induce multi-dimensional redirection on an optical beam, are an important ingredient in Applicants' realization of a compensator inducing four units of group delay on a beam using a single PBS. Accordingly, the dispersion compensators addressed in Copner do not anticipate the claims either.

Since the claims as amended recite dispersion compensators and methods therefor in which a single PBS and a plurality of ninety degree mirrors cooperate to facilitate inducement of at least four units of group delay on an optical beam, and since neither Colbourne nor Copner alone or in combination teach or suggest such an efficient PBS-based dispersion compensator, the claims are allowable.

In view of the above arguments and remarks, favorable action on all claims is respectfully requested. Accordingly, Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Should any question remain as to allowability in view of this communication, the Examiner is encouraged to call the undersigned so that a prompt disposition of this application can be achieved.

Respectfully submitted,



Scot A. Reader
Registration Number 39,002

Telephone No. (303) 440-4050
Scot A. Reader, P.C.
1320 Pearl Street
Suite 228
Boulder, CO 80302